

CLAIM AMENDMENTS

Amend claims: 1-14 and add new claims 15-20.

1. (Currently Amended)      An elongated ~~Elongated~~ shaped particle comprising two protrusions each protrusion extending from and attached to a central position, wherein the central position is aligned along the longitudinal axis of the particle, the cross-section of the particle occupying the space encompassed by the outer edges of six circles around a central circle, each of the six circles touching two ~~neighbouring~~ neighboring circles ~~whilst~~ while two alternating circles are equidistant to the central circle and may be attached to the central circle and the two circles adjacent to the two alternating circles, (but not the common circle) touching the central circle, minus the space occupied by the four remaining outer circles and including four remaining interstitial regions, the elongated shaped particle further comprising one to four additional protrusions, ~~preferably one or two additional protrusions~~, each attached to an existing endstanding protrusion as defined above, the additional protrusion being defined in the same way as above, the existing endstanding protrusion becoming the new central circle, and the original central circle becoming the other protrusion.

2. (Currently Amended)      The elongated ~~Elongated~~ shaped particle according to of claim 1, having a cross-section in which the two remaining alternating circles and, if ~~present~~, the additional protrusions have diameters in the range between 0.74 and 1.3 times the diameter of the central circle ~~as defined in claim 1, preferably between 0.87 and 1.15 times the diameter of the central circle as defined in claim 1.~~

3. (Currently Amended)      The elongated ~~Elongated~~ shaped particle according to of claims 1 ~~or 2~~, in which the angle between the two lines connecting the centers of the two remaining circles and the central circle is between 90° and 180° or between 270° 180° and 270° 180°; ~~preferably between 110° and 150° or between 210° and 250°, more preferably 120° or 240°.~~

4. (Currently Amended)      The elongated ~~Elongated~~ shaped particle according to ~~of~~ claims 1 to 3, having a cross-section in which the two remaining alternating circles and, if present, the additional protrusions have the same diameter as the central circle as defined in claim 1, ~~preferably elongated shaped particle, in which the two alternating circles and, if present, the additional protrusions are attached to the central circle as defined in claim 1, or, if applicable, claim 2.~~

5. (Currently Amended)      The elongated ~~Elongated~~ shaped particle according to ~~of~~ claims 1 to 4, having a an L/D ratio (mm/mm), wherein D is the diameter of the central circle as defined in claim 1, of between 1 and 25, ~~preferably between 2 and 10, or elongated shaped particle according to claims 1 to 5 having a length in the range between 0.5 and 15 mm, preferably between 1 and 5 mm.~~

6. (Currently Amended)      A shaped ~~Shaped~~ catalyst or catalyst precursor containing a catalytically active component or a precursor therefore, supported on a carrier, which carrier is an elongated shaped particle according to claims 1 to 5 comprising two protrusions; each protrusion extending from and attached to a central position, wherein the central position is aligned along the longitudinal axis of the particle, the cross-section of the particle occupying the space encompassed by the outer edges of six circles around a central circle, each of the six circles touching two neighboring circles while two alternating circles are equidistant to the central circle and may be attached to the central circle and the two circles adjacent to the two alternating circles, but not the common circle touching the central circle, minus the space occupied by the four remaining outer circles and including four remaining interstitial regions, the elongated shaped particle further comprising one to four additional protrusions, each attached to an existing endstanding protrusion as defined above, the additional protrusion being defined in the same way as above, the existing endstanding protrusion becoming the new central circle, and the original central circle becoming the other protrusion.

7. (Currently Amended)      The shaped ~~Shaped~~ catalyst or catalyst precursor according to ~~of~~ claim 6, wherein the component is selected from elements of Group VIII of the Periodic Table of the Elements, ~~preferably shaped catalyst or catalyst precursor wherein the Group VIII element is Fe, Co or Ni, preferably Co.~~

8. (Currently Amended) The shaped ~~Shaped~~-catalyst or catalyst precursor ~~according to~~ of claim 7; wherein the carrier is a refractory oxide, ~~preferably silica, alumina or titania,~~ more preferably titania.

9. (Currently Amended) The shaped ~~Shaped~~ catalyst or catalyst precursor ~~according to~~ of claim 7 or 8, containing an element or compound selected from Group IIA, IIIB, IVB, VB, VIB, VIIB or VIII of the Periodic Table of the Elements, ~~preferably selected from V, Zr, Mn, Ru, Re, Pt, Pd or Ag.~~

10. (Currently Amended) The shaped ~~Shaped~~ carrier ~~according to claims 1 to 5 or a~~ catalyst or catalyst precursor ~~according to~~ of claims 6 to 9, wherein the ~~carrier or~~ catalyst has been made by extrusion.

11. (Currently Amended) A process ~~Process~~ for the preparation of a carrier ~~according to claims 1 to 5 or a catalyst or catalyst precursor according to claims 6 to 9~~, by comprising two protrusions; each protrusion extending from and attached to a central position, wherein the central position is aligned along the longitudinal axis of the particle, the cross-section of the particle occupying the space encompassed by the outer edges of six circles around a central circle, each of the six circles touching two neighboring circles while two alternating circles are equidistant to the central circle and may be attached to the central circle and the two circles adjacent to the two alternating circles, but not the common circle touching the central circle, minus the space occupied by the four remaining outer circles and including four remaining interstitial regions, the elongated shaped particle further comprising one to four additional protrusions, each attached to an existing endstanding protrusion as defined above, the additional protrusion being defined in the same way as above, the existing endstanding protrusion becoming the new central circle, and the original central circle becoming the other protrusion, the process comprising pressing, extruding or otherwise forcing a granular or powdered catalyst or catalyst precursor material into various shapes under certain conditions, which will ensure that the particle retains the resulting shape, both during reaction as well as regeneration, preferably by extrusion.

12. (Currently Amended) ~~A die-plate~~ Die-plate designed for use in the preparation of a carrier or a catalyst or catalyst precursor according to claim 10, wherein the die-plate comprises comprising one or more orifices in the shape of a the cross-section of the carrier particles as defined in any of the preceding claims comprising a space encompassed by the outer edges of six circles around a central circle, each of the six circles touching two neighboring circles while two alternating circles are equidistant to the central circle and may be attached to the central circle and the two circles adjacent to the two alternating circles, but not the common circle touching the central circle, minus the space occupied by the four remaining outer circles and including four remaining interstitial regions, the elongated shaped particle further comprising one to four additional protrusions, each attached to an existing endstanding protrusion as defined above, the additional protrusion being defined in the same way as above, the existing endstanding protrusion becoming the new central circle, and the original central circle becoming the other protrusion.

13. (Currently Amended) ~~A process~~ Process for the preparation of hydrocarbons by contacting a mixture of carbon monoxide and hydrogen with a catalyst comprising as described in claims 6 to 10, a shaped catalyst or catalyst precursor containing a catalytically active component or a precursor therefore, supported on a carrier, which carrier is an elongated shaped particle comprising two protrusions; each protrusion extending from and attached to a central position, wherein the central position is aligned along the longitudinal axis of the particle, the cross-section of the particle occupying the space encompassed by the outer edges of six circles around a central circle, each of the six circles touching two neighboring circles while two alternating circles are equidistant to the central circle and may be attached to the central circle and the two circles adjacent to the two alternating circles, but not the common circle touching the central circle, minus the space occupied by the four remaining outer circles and including four remaining interstitial regions, the elongated shaped particle further comprising one to four additional protrusions, each attached to an existing endstanding protrusion as defined above, the additional protrusion being defined in the same way as above, the existing endstanding protrusion becoming the new central circle, and the original central circle becoming the other protrusion, the catalyst being optionally activated.

14. (Currently Amended) The process ~~Process for the preparation of fuels and base oils from the hydrocarbons described in~~ of claim 13; by further comprising hydrogenating, hydroisomerizing, hydrogenation, hydroisomerisation and/or hydrocracking the hydrocarbons to produce fuels and base oils..

15. (New) The shaped particle of claim 1 wherein the particle has been made by extrusion.

16. (New) A process for the preparation of a catalyst or catalyst precursor comprising a shaped catalyst or catalyst precursor containing a catalytically active component or a precursor therefore, supported on a carrier, which carrier is an elongated shaped particle comprising two protrusions; each protrusion extending from and attached to a central position, wherein the central position is aligned along the longitudinal axis of the particle, the cross-section of the particle occupying the space encompassed by the outer edges of six circles around a central circle, each of the six circles touching two neighboring circles while two alternating circles are equidistant to the central circle and may be attached to the central circle and the two circles adjacent to the two alternating circles, but not the common circle touching the central circle, minus the space occupied by the four remaining outer circles and including four remaining interstitial regions, the elongated shaped particle further comprising one to four additional protrusions, each attached to an existing endstanding protrusion as defined above, the additional protrusion being defined in the same way as above, the existing endstanding protrusion becoming the new central circle, and the original central circle becoming the other protrusion, the process comprising pressing, extruding or otherwise forcing a granular or powdered catalyst or catalyst precursor material into various shapes under certain conditions, which will ensure that the particle retains the resulting shape, both during reaction as well as regeneration.

17. (New) The shaped catalyst of claim 6 wherein the additional protrusions have diameters in the range between 0.87 and 1.15 times the diameter of the central circle.

18. (New) The shaped catalyst of claim 6 wherein the component is cobalt.

19. (New) The shaped catalyst of claim 6 wherein the carrier is selected from the group consisting of silica, alumina and titania.
20. (New) The shaped catalyst of claim 6 wherein the component is cobalt and the carrier is titania.